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Using CITES Appendix III to Protect Native Species Found in International Trade: the Case of the Philippines

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CITES, the Convention on International Trade in Endangered Species of Wild Fauna and Flora, is an international agreement among currently 183 Parties. It is based on the use of three Appendices, in which species are listed according to their need for regulation in international trade. The vast majority of all CITES species are listed in Appendix I and II. Appendix III works differently from the other two Appendices and is seldom used. If implemented correctly, the use of Appendix III could greatly contribute to positive conservation outcomes. Here, we use the Philippines as a case study to showcase the potential benefits of Appendix III listings for the conservation of nationally protected, native wildlife species. We provide an overview of wildlife trade involving the Philippines and relevant national legislation. We proceed by presenting the requirements of an Appendix III listing, under which circumstances it can succeed in assisting to protect native species, and the direct benefits to the Philippines as well as other countries striving to protect native wildlife from international illegal exploitation.

Keywords: conservation, conservation policy, wildlife trade, wildlife trafficking

CITES AND WILDLIFE TRADE

Wildlife trade is a multibillion-dollar business (Broad *et al.* 2002; Rosen and Smith 2010). Thousands of species and millions of individual animals, plants, and fungi are traded each year for food, medicine, luxury products, curios, and pets (Scheffers *et al.* 2019; Fukushima *et al.* 2020). Wildlife trade has important implications for people's livelihoods, economies, and health – as well as the conservation of species, habitats, and the environment (Nijman 2010). It can also pose a significant biosecurity risk through the facilitated spread of zoonotic diseases and the introduction of invasive alien species (Romagosa 2014; García-Díaz *et al.* 2017; Lockwood *et al.* 2019; Masila *et al.* 2020). Illegal wildlife trade is also a source of income for organized crime (UNODC 2020). Both illegal and legal but unsustainable wildlife trade threatens an ever-growing list of species (Wyatt 2013; Morton *et al.* 2021).

To protect species from unsustainable exploitation through international trade, the Convention on International Trade in Endangered Species of Wild Fauna and Flora or CITES was established. CITES entered into force in 1975 and has since become a global agreement among currently 182 member states and the European Union (all 183 of which are collectively referred to as the Conference of the Parties, or "Parties" hereafter). CITES is a binding international agreement and the Parties are obligated to implement the requirements of the Convention *via*

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their respective national legislation. CITES applies to the species or taxa listed on its three Appendices, which include the species or taxa that are listed according to their need of protection and regulation to ensure international trade is carried out legally and sustainably (https://cites.org). Appendix I includes species that are threatened with extinction and for which commercial trade is prohibited, although exceptions exist. Appendix II includes species that are not necessarily threatened with extinction, but commercial trade needs to be regulated to avoid them declining at such rates that they may become threatened in the future. Appendix II also includes certain look-alike species, which are not necessarily threatened but are listed to assist in the regulation of similar-looking threatened species. Appendix III includes species identified by any Party as within its jurisdiction, for which the cooperation of other Parties is needed to control the trade (CITES Article II; https://cites.org/eng/disc/text.php#II). Trade of species that are listed in any of the three Appendices requires authorization and is managed through a permitting system. Exemptions do apply for the trade of species listed in the Appendices – including for pre-Convention specimens, captive-bred specimens, personal or household effects, tourist souvenirs, trade for scientific and zoological purposes, or traveling exhibitions (CITES Article VII; https://cites.org/eng/disc/text.php#VII).

BENEFITS OF APPENDIX III LISTINGS

As of November 2019, there were 1,082 species and 36 subspecies in Appendix I and 37,420 species and 15 subspecies in Appendix II, while Appendix III only included 211 species, 14 subspecies, and one variety (https://cites.org/eng/disc/species.php). While the vast majority of CITES taxa are listed in Appendices I and II, there are many advantages of using Appendix III to assist in the conservation of certain species that are not yet CITES listed. These advantages include: i) a comparatively easier listing and permitting process, ii) the provision of a legal basis for law enforcement bodies in importing countries to seize illegal specimens, iii) the prevention of overexploitation of at-risk species, as well as iv) monitoring of international trade patterns and volumes of listed species.

An Easy Listing and Permitting Process

For a listing in Appendix I or II, the Parties normally meet approximately every three years at the Meeting of the Conference of the Parties (CoP) to discuss all matters with regards to the Convention, including the listing status of species, although a postal procedure is also available (CITES Article XV: https://cites.org/eng/disc/text.php#XV). For changes to the Appendices I and II, species can be proposed to be listed, de-listed, or transferred to a different Appendix at the CoP, and each change in status requires support from a two-thirds majority of the voting Parties present at the CoP (except for postal votes) to be accepted. After the CoP, it takes 90 days for the changes to come into effect (CITES Article XV), unless the Parties have voted to delay entry into force or if Parties start voluntarily enforcing a listing sooner. In contrast, an Appendix III listing is comparatively easier because it can be proposed unilaterally by any Party at any time by notifying the CITES Secretariat. It is recommended to inform the CITES Secretariat at least three months before the next CoP of the intention to include or delete a species from Appendix III; this is to ensure the Appendix III listings enter into force on the same date as new Appendix I and II listings (Res. Conf 9.25 (Rev. CoP18): https://cites.org/eng/res/09/09-25R16.php). However, depending on the species and the reasons why the species is sought to be listed in Appendix III, it may make sense to include it at other times (e.g. if the listing is purposefully done to prevent overexploitation prior to proposed stricter protection, or if there is otherwise a sudden increase in demand. As a requirement, the submitting Party is asked to make any domestic laws and regulations (and interpretations thereof) applicable to the protection of the proposed species available (CITES Article XVI: https://cites.org/eng/disc/text.php#XVI). They also need to submit any changes to the legislation (if any) for as long as the species is listed in Appendix III. It is also possible to only list certain parts or derivatives of a species, or only national populations. The listing of species in Appendix III also takes 90 days to come into effect after the Secretariat has communicated the change to the Parties (CITES Article XVI). Any Party that opposes the listing can enter a Reservation. If not otherwise regulated through national legislation, the reserving Party is then treated as a non-Party in regards to the species it has entered a Reservation for.

For species listed in Appendix III, there are fewer requirements for issuing a permit than for Appendix I and II listed specimens. Appendix I specimens require import, export, and/or re-export permits, while Appendix II specimens usually only require export permits and/or re-export permits (CITES Articles III, IV, and V). For both Appendix I and II specimens, non-detriment findings (NDF) are required and sometimes national export quotas, which may meet the NDF requirements, are set by range countries (Res. Conf. 16.7 (Rev. CoP17): https://cites.org/eng/res/16/16-07.php; see https://cites.org/eng/prog/ndf/index.php for more details on NDFs). In contrast, NDFs are not required for species listed in Appendix III prior to export [Res. Conf. 16.7 (Rev. CoP17)]. The listing Party must only provide an export permit, while each other Party wishing to trade in the Appendix III-listed species

needs to provide a certificate of origin. In the case of a re-export from any country, a re-export permit needs to be issued (CITES Article V; https://cites.org/eng/disc/text.php#V). The permits are issued by the country's management authority if they are satisfied that the specimen has been obtained legally. In the case of living specimens, it must be ensured that they are transported to "minimize the risk of injury, damage to health, or cruel treatment" (CITES Article V). Trade of specimens listed in Appendix III is, therefore, documented and checked, but the requirements for trade are less bureaucratic, and the workload for the relevant national CITES Authorities is substantially reduced.

Taking Action Against Illegally Exported Species in Non-native Countries

A listing in Appendix III provides law enforcement agencies in consumer and transit countries with a means to take action against trade in illegally sourced specimens. Law enforcement authorities are often unable to confiscate specimens of wildlife species that were illegally harvested and exported from their native range countries if they are not specifically protected in the country where they are detected. Some countries have legislation in place that allows them to seize illegally acquired and traded wildlife, *e.g.* the Lacey Act in the United States of America. The Lacey Act provides for law enforcement authorities to confiscate wildlife specimens that are unlawfully imported, exported, sold, acquired, or purchased – which were taken, possessed, transported, or sold in violation of any domestic or any foreign law (https://www.fws.gov/international/laws-treaties-agreements/us-conservation-laws/lacey-act.html). Many other countries do not have these provisions in their legislation and specimens of non-native species that are not specifically protected cannot always be confiscated in consumer countries, even if they are nationally protected in their range states and their export is prohibited. CITES-listed species are usually an exception, as Parties to the Convention need to ensure that they can be confiscated if they are traded in violation of the Convention. Arguably, an Appendix III listing is not an ideal long-term solution for this general problem, and more countries should adopt legislation similar to the Lacey Act [see also Auliya *et al.* (2016)]. However, Appendix III may provide an interim solution until better legislation is in place for illegally exported, nationally protected specimens of species, which could otherwise not be confiscated.

Prevention of Overexploitation

Appendix III can also serve as a tool to prevent the over-exploitation of species proposed for stricter protection, for example under CITES Appendix I or II. It has been shown that species – which are proposed for stricter protection, for example under CITES – are often "stockpiled" just prior to the increased protection, as traders may fear that the species will become more difficult to obtain or too expensive after the increased protection, and a "gold-rush" for the species is set in motion (Rivalan *et al.* 2007; Janssen and Krishnasamy 2018). The rarity of certain species in trade is exacerbated by the "anthropogenic Allee effect," which increases the financial value of a species the rarer it becomes (Courchamp *et al.* 2006). It, thereby, outweighs the higher costs of extracting the last remaining individuals of a population and can cause local, if not total, extinctions. Depending on the initial harvest effort, even species with population sizes above the critical Allee threshold – and for which the Allee Effect persists – can quickly get caught in an extinction vortex (Holden and McDonald-Madden 2017). The anthropogenic Allee effect and stockpiling issues are important to consider, as for example the time between the publication of a proposal for an up-listing from CITES Appendix II to Appendix I and the time the listing comes into effect takes between 240–420 days, leaving plenty of time for traders to harvest the species before the increased trade restrictions apply (Rivalan *et al*. 2007). If, in this phase, a species is inadequately protected – for example, because it is not CITES listed at all – it becomes very difficult to reverse or halt the process. A published example of a non-CITES listed species that may have benefited from increased protection prior to its proposed Appendix I listing is the earless monitor lizard (*Lanthanotus borneensis*) (Janssen and Krishnasamy 2018). The sudden increase in demand and trade of the earless monitor lizard following the proposal could potentially have been avoided by listing it in Appendix III as an interim measure, before a decision was made to eventually list the earless monitor family "Lanthanotidae" in Appendix II, or better yet, before the proposal to list it in Appendix I was announced. However, in this case, calls for an immediate Appendix III listing were ignored (Nijman and Stoner 2014; Janssen and Krishnasamy 2018).

Discerning International Trade Patterns

The trade of specimens of species listed in any of the three Appendices is recorded by the national CITES authorities in the annual legal trade reports (CITES Article VIII; https://cites.org/eng/disc/text.php#VIII). These data are also made available through the CITES Trade Database (https://trade.cites.org/). An Appendix III listing can, therefore, also be used to track trade routes and explore destination and transit countries. It is possible to discover trade patterns that were previously unknown and which may help in gauging the extent of international trade in a given species. In this sense, an Appendix III listing can be regarded as a "watch-list" for species, for which more knowledge about their international trade

patterns is needed. It provides a means of gathering trade data and other relevant information to assist the CITES Management and Scientific Authorities in a country or region in determining the impact, if any, of international trade on native populations. Importantly, a listing in Appendix III should be provisional and is not a one-way street. On the basis of the findings from an Appendix III listing, it is possible to determine whether: i) the species needs more regulation, *e.g.* through a listing in Appendix II or I; ii) the trade can be contained without further help of the Parties (in which case the species could be removed from Appendix III); or iii) whether it makes sense to keep the species on Appendix III to keep monitoring trade levels and routes.

WILDLIFE TRADE AND THE PHILIPPINES

The Philippines is a biodiversity hotspot and is located in one of the regions that are most heavily impacted by unsustainable exploitation (Myers *et al.* 2000; di Minin *et al.* 2019). It has a particularly high number of endemic species (Myers *et al*. 2000), and endemic and rare species are often highly coveted in the wildlife trade [*e.g.* Courchamp *et al.* (2006)]. The Philippine pangolin (*Manis culionensis*) and Philippine forest turtle (*Siebenrockiella leytensis*), for example, are endemic to the Palawan island groups. Both species are classified as "Critically Endangered" by the IUCN Red List of Threatened Species (Asian Turtle Trade Working Group 2000; Schoppe *et al.* 2019) and are severely threatened by illegal international trade (Schoppe and Shepherd 2013; Heinrich *et al.* 2017; Sy *et al.* 2020). These species are already listed in CITES Appendix I and II respectively.

Much of the wildlife trade in the Philippines is domestic, but numerous wildlife species are also coveted internationally to satisfy the demand for food, traditional medicines, luxury goods, pets, and curios (Cruz *et al.* 2007; Diesmos *et al.* 2008; Sy 2018). The live animal trade for pets, in particular, appears to be thriving (Cruz *et al.* 2007; Sy 2018). While the Philippines has strong wildlife legislation in place, illegal trade catering to the domestic and international market continues to thrive (Diesmos *et al.* 2008; Asis *et al.* 2016; Krishnasamy and Zavagli 2020; Sy and Lorenzo 2020).

The Philippines has been a Party to CITES since 1981 and is currently considered a Category 2 country, meaning the national legislation in place is believed to meet one to three of the four requirements for effective implementation of CITES, which are laid out in Resolution Conference 8.4 (Rev. CoP15) (https://cites.org/eng/res/08/08-04R15.php). However, an agreement between the Philippines and the CITES Secretariat on revised legislative analysis suggests that a Category 1 status is possible in the near future (CITES National Legislation Project: https://cites.org/eng/legislation/National_Legislation_Project).

Philippine Wildlife Legislation

This study is not a comprehensive review of the Philippines' wildlife legislation. Rather, it is aimed at improving the use of CITES Appendix III and the potential use that it has in the conservation of nationally protected species, using the Philippines as a case study. The Philippines has strong wildlife protection laws in place, mainly consisting of the Wildlife Resources Conservation and Protection Act of 2001 [Republic Act (RA) No. 9147, hereafter also referred to as the "Wildlife Act"] and its Implementing Rules and Regulations, as well as the Fisheries Code of 1998 (RA No. 8550, hereafter also referred to as the "Fisheries Code'"), as amended in 2014 by RA No. 10654. Notably, the Philippines has a Wildlife Management Fund set up – as specified in Chapter VI, Section 29 of the Wildlife Act – which essentially derives its money from imposed fines for crimes committed in violation of the Act. The money can then be used for conservation and related enforcement actions.

Terrestrial wildlife (animals and plants), as well as dugongs (*Dugong dugon*), turtles, tortoises, and wetland species, including but not limited to crocodiles, waterbirds, and all amphibians, fall under the jurisdiction of the Department of Environment and Natural Resources (DENR). Under the DENR, the Biodiversity Management Bureau (BMB) is responsible for the implementation of the Wildlife Act as part of the Protection and Conservation of Wildlife Program. All aquatic wildlife, including but not limited to all fishes, aquatic plants, invertebrates, and all marine mammals, with the exception of dugongs, fall under the jurisdiction of the Department of Agriculture (DA). Under the DA, the Bureau of Fisheries and Aquatic Resources (BFAR) is responsible for the implementation of the development, improvement, law enforcement, management, and conservation of the Philippines' fisheries and aquatic resources and, thereby, the Fisheries Code. Further, for all wildlife species found in the Province of Palawan, jurisdiction falls to the Palawan Council of Sustainable Development (PCSD), as stipulated in the Strategic Environmental Plan for Palawan Act (RA No. 7611). For more detailed information see Annex I of the joint DENR-DA-PCSD Administrative Order No. 2004-1. For the purpose of this study, the following sections will focus on terrestrial wildlife.

The Wildlife Act covers native and exotic (*i.e.* non-native) species that are traded in the Philippines, and – as the main CITES implementing legislation – governs the trade in CITES-listed species. The export of wild-caught terrestrial

fauna for commercial purposes is prohibited without relevant permits (see also CITES Notification 2010/038: https://cites.org/sites/default/files/eng/notif/2010/E038.pdf). Pursuant to Section 5 and 22 of the Wildlife Act, the preliminary "List of Threatened Wildlife" was established by DENR Administrative Order (DAO) No. 2004-15 issued on 22 May 2004. The list was last updated by DAO No. 2019-09 on 12 July 2019. The DENR, thereby, lists terrestrial wildlife species into different categories after assessing the level of threat to each species. The List of Threatened Wildlife is separated into the different categories of "Threatened" ("Critically Endangered," "Endangered," "Vulnerable," "Other Threatened Species") and "Other Wildlife Species" (which are species that are not currently classified as threatened). Further, the "National List of Threatened Philippine Plants and their Categories" was established by DAO No. 2007-01 issued on 22 January 2007 and amended by DAO No. 2007-24. The list of threatened plant species was last updated through DAO No. 2017-11 on 02 May 2017.

Under DAO No. 2019-09, species listed in CITES Appendix I are considered as "Critically Endangered" species, CITES Appendix II species are considered "Endangered," while CITES Appendix III species are considered "Vulnerable" for prosecutorial purposes. Native species that are not specifically listed in any of the categories, as well as all non-CITES listed exotic species traded in the Philippines, are treated as "Other Wildlife Species" (*i.e.* not categorized as threatened).

The penalties that apply depend on the threat category that the wildlife species is listed in. The highest penalty under the Wildlife Act is for the unauthorized killing of "Critically Endangered" wildlife, which is punishable with a sentence of 6–12-year imprisonment and/or a fine of PHP 100,000–1,000,000 (~ USD 2,000–20,000). For (both domestic and international) wildlife trade specifically, a maximum penalty can be imposed for the trade in a "Critically Endangered" species of 2–4-year imprisonment and/or a fine of PHP 5,000–300,000 (~ USD 100–6,000), and a minimum penalty for the trade of "Other Wildlife Species" with imprisonment of 10 days to 1 month and/or a fine of PHP 200–20,000 (~ USD 4–400). Penalties for the remaining different categories ("Endangered," "Vulnerable," "Other Threatened Species") range between the minimum and maximum sentences. However, the Act provides for an increase of at least 10% every three years for the imposed fines to "compensate for inflation, and maintain the deterrent effect of such fines" (Chapter V, Section 28 of the Wildlife Act). This means that, at the time of writing, there would be at least a 60% increase of the fines described in the law from 2001. For the full list of applicable penalties, see the Wildlife Act (Chapter V, Section 28).

The Philippines is a signatory to the United Nations Convention against Transnational Organized Crime (UNTOC), and the penalties for wildlife crime under the Wildlife Act and The Fisheries Code qualify for "serious crimes" as defined in Article 2 of UNTOC ("serious crime" shall mean conduct constituting an offense punishable by a maximum deprivation of liberty of at least four years or a more serious penalty"). Wildlife crime is also a predicate offense under the Philippines Anti-Money-Laundering Act (RA No. 9160, as amended by RA Nos. 9194, 10167, and 10365).

The Philippine wildlife laws in place are seemingly strong, but – as in other countries too – reports suggest that corruption is high (*e.g.* the 2020 Corruption Perception Index score for the Philippines was 34 out of 100, with lower scores indicating higher levels of corruption; https://www.transparency.org/en/cpi/2020/index/phl), and enforcement capabilities low (Sy 2021). This hinders the effective implementation of existing laws and is an area that needs to be strengthened. It is also reported that the courts do not make use of the full extent of the law and the imposed penalties are unlikely to serve as a deterrent to other offenders [*e.g.* Sy and Krishnasamy (2020)]. However, new programs such as the 10-year national Wildlife Law Enforcement Action Plan (WildLEAP) from 2018–2028 are an important step for improvement in the future. WildLEAP is aimed to address wildlife crimes more effectively by prioritizing enforcement activities, allocating funds and resources, evaluating impacts of enforcement, curbing corruption, and strengthening collaboration among all relevant agencies and government bodies (DAO No. 2020-13).

The Philippines and Appendix III

A total of 1,985 species and an additional two subspecies that are considered native to the Philippines are currently listed in CITES (data obtained from www.speciesplus.net, current as of October 2021). The vast majority of these (*i.e.* 84%) come from the Family listing of the Orchidaceae ("orchids"; 997 listings) and the Order listing of the Scleractinia ("stony corals"; 669 listings). However, this means that roughly 5% of all CITES-listed taxa (n = 38,460) are native to the Philippines, of which 763 species (~ 2%) are Philippine endemics. An additional 15 species that are native to the Philippines are considered to be threatened by trade and, thereby, listed in the Annexes of the European Union (EU) wildlife trade regulations (Council Regulation EC No. 338/97) but not in the CITES Appendices (Table 1; noting that eight of these 15 species are about to be deleted from the Annexes of the EU wildlife trade regulations). A further 15 CITES species and two species listed in the EU wildlife trade regulations occur in the Philippines but are not considered native.

Table 1. Non-CITES listed Philippine native species that are listed in one of the Annexes of the EU wildlife trade regulations (Council Regulation EC No. 338/97).

Class	Order	Family	Genus	Species	Annex
Aves	Anseriformes	Anatidae	*Spatula*	*querquedula*	A[1]
Aves	Ciconiiformes	Ardeidae	*Ardea*	*alba*	A
Aves	Ciconiiformes	Ardeidae	*Bubulcus*	*ibis*	A
Aves	Ciconiiformes	Ardeidae	*Egretta*	*garzetta*	A
Aves	Columbiformes	Columbidae	*Ducula*	*pickeringii*	D[2]
Aves	Columbiformes	Columbidae	*Gallicolumba*	*crinigera*	D[2]
Aves	Columbiformes	Columbidae	*Ptilinopus*	*marchei*	D[2]
Aves	Passeriformes	Estrildidae	*Erythrura*	*coloria*	D[2]
Aves	Passeriformes	Estrildidae	*Erythrura*	*viridifacies*	D[2]
Aves	Passeriformes	Estrildidae	*Lonchura*	*punctulata*	D[2]
Aves	Passeriformes	Zosteropidae	*Zosterornis*	*whiteheadi*	D[2,3]
Aves	Passeriformes	Pittidae	*Pitta*	*steerii*	D[2]
Reptilia	Serpentes	Hydrophiidae	*Hydrophis*	*curtus*	D[4]
Insecta	Lepidoptera	Papilionidae	*Graphium*	*sandawanum*	B
Insecta	Lepidoptera	Papilionidae	*Papilio*	*benguetanus*	B

[1]Listed as *Anas querquedula*
[2]Noting that the Scientific Review Group of the European Union has decided to delete these species from Annex D (see https://beta.op.europa.eu/en/publication-detail/-/publication/cf1e9177-615a-11eb-8146-01aa75ed71a1/language-en/format-HTML/source-199187019)
[3]Listed as *Stachyris whiteheadi* (Family: Muscicapidae)
[4]Listed as *Lapemis curtus*

The Philippines has never listed any species in Appendix III. Five species native to the Philippines are currently listed in Appendix III, but all of them were listed by other Parties, including precious coral (*Corallium elatius* and *Corallium konjoi*, both listed by China), as well as the binturong (*Arctictis binturong*), common palm civet (*Paradoxurus hermaphroditus*), and South Asian bockadam (*Cerberus rynchops*) (all listed by India).

Apart from the binturong (which is listed under "Other Threatened Species" in DAO 2019-09) and the South Asian bockadam [which is listed as 'Endangered' in Fisheries Administrative Order (FAO) No. 2001-208], none of the other species are specifically listed in any of the categories pursuant to RA Nos. 9147 and 8550. Even though it is not specifically listed, the common palm civet is included in the non-threatened species ("Other Wildlife Species") category, but – as it is an Appendix III species – it should automatically be treated as "Vulnerable." However, DAO No. 2019-09, Section 6 states that "should a species listed in both CITES and this Order fall into different categories, the category of this Order shall prevail." Therefore, even though the binturong and common palm civet are both CITES-listed species, the binturong would be classified as "Other Threatened Species" (*i.e.* threatened), while the common palm civet would be classified as "Other Wildlife Species" (*i.e.* non-threatened).

This may be an area that could be strengthened, *i.e.* if a species is listed in both CITES and DAO No. 2019-09 and fall into different categories, the higher threat category should ideally prevail. Appendix III species were formerly treated as "Endangered," as per Joint AO 2004-01, Rule 28.1. However, through the update of the List of Threatened Wildlife in DAO No. 2019-09 (for fauna) and DAO No. 2017-11 (for flora), the threat category – and, thereby, the applicable penalties for Appendix III species – was lowered. If not otherwise listed, all terrestrial Appendix III species are now classified as "Vulnerable" in the Philippines and any violation of the Wildlife Act for species listed in Appendix III and – not accounting for the 10% increase in imposed fines every three years since the enactment of the law – thereby carries a minimum sentence of 1–3 months in prison and/or a fine of PHP 5,000–20,000 (~ USD 99–394) for the maltreating and/or transporting of Vulnerable species and a maximum sentence of 2–4 years in prison and/or a fine of PHP 30,000–300,0000 (~ USD 591–5,908) for the killing of a Vulnerable species. The trade of a Vulnerable species is punishable by imprisonment of 6–12 months and/or a fine of PHP 1,000–100,000 (~ USD 20–1,970). For aquatic species, the penalties are much higher and are to be imposed regardless of the threat category of the species. According to Section 11 and 97 of The Fisheries Code, the fishing and taking of rare, threatened, or endangered species shall be

unlawful and is punishable by imprisonment of 12–20 years and/or PHP 120,000 (~ USD 2,450), forfeiture of the catch, and the cancellation of the fishing permit (if applicable).

The lists of threatened terrestrial species were last updated in 2017 (for flora) and 2019 (for fauna). They will require continual updates to reflect the current status of all species that are presently on the lists, but also those that may benefit from being included in any of the categories in the future. It is further important to keep up with the current taxonomy in this regard. For example, the South Asian bockadam (*C. rynchops*) is listed as "Endangered" in FAO No. 2001-208. However, the genus *Cerberus* was revised in 2012, and the Philippine populations are now considered a distinct species (*C. schneiderii*) (Murphy *et al.* 2012). It is currently unclear how this will affect the need for the Philippines to issue a Certificate of Origin for this species. To avoid any confusion, the lists need to be updated continuously to also reflect these changes in taxonomy. It is recommended that the Philippines establish a list of potential candidate species that might benefit from being included in Appendix III. Once the assessment for a selection of candidate species for an Appendix III listing is completed and a list of candidate species is established, the list needs to be sent to the CITES Secretariat in Switzerland, notifying them of the intention to list those species in CITES Appendix III. In the Philippines, the responsible agencies for this would be the DENR-BMB for terrestrial species and DA-BFAR for aquatic species.

SPECIES CRITERIA FOR AN APPENDIX III LISTING

If effectively implemented, the Philippines would greatly benefit from using Appendix III, securing the collaboration of all CITES Parties to regulate or prevent trade in the listed species, especially since the export of wild-caught specimens for commercial purposes without a permit from the Philippines is strictly prohibited. Species that are known or suspected to be in international trade but not yet CITES-listed can undergo further assessment to establish whether they would qualify for an Appendix III listing. Crucially, the proposed species should ideally fit certain criteria for the listing to contribute to positive conservation outcomes. The general recommendations for listing species in Appendix III are laid out in Res. Conf. 9.25 (Rev. CoP18), which we have replicated in Table 2.

Importantly, these criteria are meant to provide guidance and are recommendations to ensure the conservation success of potential listings. However, not every single one of the (sub-) criteria needs to be fulfilled for a listing to contribute to the conservation of the species.

For example, while endemism (in combination with other characteristics) is a recommended criterion, it is possible to list a species that is native but occurs in more than one range country. In this case, Res. Conf 9.25 (Rev. CoP18) recommends that the listing Party consult with all range states of the species in question. If not every range state subsequently agrees to list the species in Appendix III, and depending on the nature of the trade, it is possible that the listing can become ineffective, impossible to enforce, and prone to illegal acts, such as the laundering of specimens through range states where the species is not listed. Currently, there are many species in Appendix III whose full native ranges are not covered by the listing Parties. For a species already listed in Appendix III, it is possible for other range states to also list the same species at any time to make an existing listing more effective. This would greatly reduce laundering opportunities and enforcement difficulties, especially if all remaining range countries were to do the same. For the binturong, for example, it is possible for the Philippines to also list the species. This would simultaneously ensure that the Palawan endemic subspecies, the Palawan binturong (*Arctictis binturong whitei*), receives strengthened international protection. To protect vulnerable subspecies and/or populations, a species-level CITES listing may be more beneficial as opposed to a separate subspecies listing, which can result in enforcement difficulties, especially if subspecies are difficult to distinguish from each other, but this is an issue for any species and regardless of the Appendix it is listed in. The listing of subspecies in different Appendices is generally discouraged, as detailed in Res. Conf. 9.24 (Rev. CoP17) Annex 3 (https://cites.org/eng/res/09/09-24R16.php). It should normally also not be permitted to place national populations of a species in the Appendices if the rest of the species remains outside the Appendices [Res. Conf. 9.24 (Rev. CoP17)].

It is unclear how effective the listing for binturongs in Appendix III is in general, as it has such a wide range – occurring in at least 13 countries – but only one country (India) has listed them in Appendix III so far. If international trade is believed to be a threat to wild binturong populations and long-term survival, they may potentially be better suited to be included in Appendix II if the remaining range states do not want to separately list the binturong in Appendix III. However, if other range states are opposed to listing the species in Appendix III, they may also be opposed to listing the species in Appendix I or II. One advantage of the current Appendix III listing, as compared to it not being listed at all, is that at least legal trade data is recorded for binturongs from a variety of countries – noting, however, that many Parties are not implementing the provisions of the Convention in regards to Appendix III properly [Res. Conf. 9.25 (Rev. CoP18)], which is an area that needs to be strengthened and Parties

Table 2. Recommended criteria for an Appendix III listing, as specified in Annex 1 of Res. Conf. 9.25 (Rev. CoP18).

Criterion	Sub-criteria
Trade status	a) Documented, suspected, possibly new, or rapidly increasing exports of a species not currently regulated under CITES
	b) Increased availability of the species in international markets
	c) Species known or suspected to be in illegal trade
	d) Uncertainty regarding the volume of international trade and interest to monitor levels of such trade
	e) Increasing trade of or demand for a species that is demonstrably difficult to breed and maintain in captivity or to artificially propagate
Biological aspects and characteristics	a) The conservation status of the species under available assessments and any conservation concerns due to international trade that these assessments may indicate
	b) Species with intrinsic biological characteristics that make them especially vulnerable to harvest, trade, habitat loss, or climate change, including, but not limited to: i) species with habitat or food specializations in at least one life stage; ii) species that are easy to detect or collect, or both (*e.g.* sessile or sedentary species); and iii) species with high age of maturity, low reproductive output, high natural mortality rate, or occurrence in low abundances;
	c) Harvest and trade effects in relation to the species' biology and life history characteristics, including but not limited to: i) species range; ii) population structure, status, and trends; and iii) age- or sex-specific offtake
	d) Endemism in combination with other characteristics recommended for consideration, noting that endemism by itself is generally not recommended as useful for considering whether a species belongs in Appendix III.

sensitized to this issue. The data that is gathered, however, might ultimately support the decision to list a species in Appendix I or II, or to remove it from Appendix III, if warranted.

Generally, however, endemic species may be better suited to be included in Appendix III than native species. The endemic Batanes pit viper (*Trimeresurus mcgregori*) provides a good example of an endemic species that would likely greatly benefit from an Appendix III listing. The Batanes pit viper is found in international trade, not CITES-listed, and described as "Data Deficient" on the IUCN Red List (Sy *et al.* 2009). However, it has been recognized to be among the most threatened viper species globally (Maritz *et al.* 2016) and is increasingly appearing on the international pet market – a worrying trend that requires further investigation. Owing to its very restricted distribution on very few small islands (Batan and Sabtang) (Sy *et al.* 2009; DENR 2020), even small amounts of offtake may render the species vulnerable to other extrinsic factors/stochastic events. In the Philippines, it is listed as "Endangered" on DENR's List of Threatened Wildlife (DAO No. 2019-09). Other non-CITES listed species that are endemic to the Philippines, found in international trade, and which might benefit from an Appendix III listing (pending further assessment whether they would be suited to be included in Appendix III) include the Philippine sailfin lizard [*Hydrosaurus pustulatus*; see also Heinrich *et al.* (2021)], Polillo false gecko (*Pseudogekko smaragdinus*), and Philippine yellow-spotted pit viper (*Trimeresurus flavomaculatus*) – all of which are listed as "Other Threatened Wildlife" on DENR's List of Threatened Wildlife; the "Vulnerable" Mindanao bleeding-heart pigeon (*Gallicolumba crinigera*) and Philippine chevrotain (*Tragulus nigricans*), or the "Endangered" flame-breasted fruit dove (*Ptilinopus marchei*).

Other Important Considerations

Additional to the criteria outlined above, before listing a species in Appendix III, there are further important considerations that need to be taken into account. All CITES listings, regardless of the Appendix a taxon is listed in, can be subject to exemptions as per CITES Article VII. However, for Appendix III specimens, the exemption for "personal and household effects" is the only CITES exemption that does not require any CITES documentation (for any of the other exemptions as per Article VII of the Convention, CITES documentation is still required to trade in these specimens). This is an important consideration when thinking about listing a species in Appendix III, as the most traded commodity of the species might influence the listing's success or failure. In the past, listings were

unsuccessful because of this, for example, when Australia listed the great white shark (*Carcharodon carcharias*) on Appendix III in 2001 (UNEP-WCMC 2014), when its predominant and most valuable trade commodities at the time were its teeth and jaws. These were, without the need for CITES documentation, traded as souvenirs and personal effects (Willoek *et al.* 2004). Generally, species that are traded for commercial purposes are more likely to benefit from a listing in Appendix III than those that are primarily traded for "personal" purposes [see also Willoek *et al.* (2004)]. Live specimens, even if they are traded as personal or household effects, still require documentation – either in accordance with the provisions of Articles III, IV, and V of the Convention and/or with Res. Conf. 10.20 (https://cites.org/eng/res/10/10-20C15.php). In the Philippines, the live pet trade appears to be thriving (Sy 2018, 2021). As live animals, even of Appendix III listed species, still need documentation many of the species that are traded primarily for the pet trade can generally be considered promising candidates for an Appendix III listing.

Parties do have the opportunity to implement stricter domestic measures [see CITES Article XIV and Res. Conf. 13.7 (Rev.CoP17); https://cites.org/eng/res/13/13-07R16.php], but not many Parties do so for specimens of Appendix III species. The personal effects exemption does not apply if the trading partner (Party) has indicated that they generally do not accept the CITES exemption for personal and household effects (which is also an important consideration when analyzing CITES data). It is, therefore, a way of limiting the potentially negative impacts of this exemption for an Appendix III listing. In the case of the Philippines, an import or export permit for all wildlife is still required – including CITES listed and non-CITES listed species – even for personal and household effects (DAO No. 2004-55).

Another consideration is the potential for the identification of specimens in trade. The correct identification of species is immensely important for the enforcement of existing laws and regulations; however, it can in some cases be difficult and is a major problem associated with wildlife trade in general (Ewart *et al.* 2018; Ueland *et al.* 2020). This is further exacerbated when only parts, derivatives, finished or raw products of species, or even only populations of certain species are CITES listed and may hinder the effectiveness of a listing. CITES provides the opportunity to include the so-called "look-alike species" of those listed in Appendix II (CITES Article II.2b). As this provision does not apply to Appendix III species, it is therefore important to consider similar-looking, non-CITES listed species that could be used to launder Appendix III-listed species under the guise of these non-listed species. In the Philippines, it has been shown that traders illegally try to export different species of eels, sharks, and rays in their juvenile forms or as products, because these commodities and/or life stages are difficult to identify to the species level by morphological characteristics alone (Asis *et al.* 2016). An Appendix III listing for such species would, therefore, likely not be effective – unless the similar-looking species are also covered by CITES, the Philippines specifically prohibit the export of certain life-stages and/or commodities, or develops appropriate and feasible identification techniques.

Another issue is the sometimes-inconsistent use of nomenclature for taxa, which can make law enforcement difficult in certain cases, as specimens of CITES-listed wildlife species could be traded under a different name (see *e.g. Cerberus rhynchops/schneiderii*, Res Conf. 12.11 (Rev. CoP18) (https://cites.org/eng/res/12/12-11R17.php) clarifies that Parties should follow standard taxonomic references whenever available or submit their preferred published taxonomic authority for nomenclatural reference. This is again an issue that is relevant for species listed in any of the three Appendices but also needs to be considered carefully when listing species in Appendix III.

CONCLUSIONS

There are many benefits of an Appendix III listing for species conservation, particularly for endemic species. It provides a means for law enforcement agencies in other countries to confiscate non-native, illegally exported specimens of wildlife species and to act against offenders. It further provides a tool to monitor international trade, without the strict permit requirements of CITES Appendix I and II, and may be used to prevent overexploitation of at-risk species proposed for stricter (CITES) regulation. The listing process is easier, can be done unilaterally at any time and on short notice, which is arguably one of the biggest benefits, as it can be used to regulate sudden surges in trade in a species of concern. The Philippines provides a valuable example of a country that has never made use of Appendix III but could greatly benefit from its application to further protect its native wildlife.

The Philippines has a high number of endemic species, many of which are found in international trade, regardless of being protected by national legislation in the Philippines. The Philippines has strong wildlife legislation in place, but given the considerable demand and continuing (international) trafficking of Philippine species, many of these species may benefit from being listed in CITES Appendix III. The Philippines should consider undertaking a general review of species to identify potential candidates that might benefit from inclusion in CITES Appendix III.

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